DEPARTMENT OF THE INTERIOR
UNITED STATES GEOLOGICAL SURVEY

KINGDOM OF SAUDI ARABIA

OPEN-FILE REPORT USGS-OF 83-09
PLATE 1

Geologic base adapted from Sable (1982a,b)

This report is preliminary and has not been reviewed for conformity with U.S. Geological Survey editorial standards and stratigraphic nomenclature.

SCALE 1 : 100 000

2 0 2 4 6 8 10 KILOMETERS

2 0 2 4 6 8 10 MILES

TRUE NORTH

QUADRANGLE LOCATION

MAP UNITS CITED IN TEXT

Wadi Habawnah quadrangle
(adapted from Sable, 1982a)

dgv, fp, tgdg, gdmg, fpmv, fpdg, dggu, sgd	MIXED LAYERED AND INTRUSIVE ROCKS
gbd	OLIVINE-HORNBLENDE GABBRO AND DIORITE
dg	METADIORITE AND METAGABBRO
gdmg	GRANODIORITE-MONZODIORITE, UNDIVIDED
tgdg	TONALITE-GRANODIORITE GNEISS
tbg	BIOTITE-TONALITE GNEISS
mdsa, pgsa	PARAGNEISS
ms	METASEDIMENTARY ROCKS
rd	RHYOLITE OR DACITE
mvs	METAVOLCANIC AND METASEDIMENTARY ROCKS
mvf	METAVOLCANIC FLOW ROCKS

Najran quadrangle
(adapted from Sable, 1982b)

mgm	BIOTITE-MUSCOVITE GRANITE
gbac	SYENOGRANITE TO MONZOGRANITE
sgpf	FINE-GRAINED SYENOGRANITE
sgpc	EPIDOTE SYENOGRANITE
sgpa	SYENOGRANITE AND QUARTZ SYENITE
msda	METASEDIMENTARY ROCKS, DIORITE-GABBRO, AND AMPHIBOLITE, UNDIVIDED
tbg	BIOTITE-TONALITE GNEISS
pgsa	AMPHIBOLITE
fqg, qmh	PARAGNEISS AND SCHIST
tpg	TONALITE AND PARAGNEISS
ms	METASEDIMENTARY ROCKS
fp	FELSOPHYRE
mvfs	METAVOLCANIC FLOW ROCKS AND GREENSCHIST

SYMBOLS

D	Potentially favorable area A, B, C - niobium, rare earths, zirconium, thorium, fluorite D, E - copper
	Area of volcanic rocks
•	Sample location
•137743	Location and number of sample in favorable resource area
•F18	Ferruginous outcrop sampled
•SV	Location of reported gossan; visited but not sampled

GEOLOGIC MAP SHOWING THE AREAS OF MINERAL POTENTIAL IN THE WADI HABAWNAH AND NAJRAN QUADRANGLES, SHEETS 17/44 A AND C, KINGDOM OF SAUDI ARABIA

by
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1982